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Table 1. Academic science and engineering research space, by field: 1988-99 [1] (revised)

Field	Net assignable square feet [in millions]							Percent change[2]
	1988	1990	1992	1994	1996	1998	1999	1998-99
All fields	112	116	122	127	136	143	148	7
Biological sciences								
In medical schools	8	9	11	11	11	12	12	8
Outside medical schools	16	18	17	17	19	19	19	-1
Medical sciences								
In medical schools	14	15	16	17	18	18	19	9
Outside medical schools	5	5	6	6	7	7	7	19
Agricultural sciences	18	21	20	20	22	25	24	18
Engineering	16	17	18	21	22	23	24	7
Physical sciences	16	16	16	17	18	18	19	1
Earth, atmospheric, and ocean sciences	6	6	7	7	7	8	8	6
Social sciences	3	3	3	3	4	5	5	2
Psychology	3	3	3	3	3	3	3	-9
Computer sciences	1	1	2	2	2	2	2	12
Mathematics	1	1	1	1	1	1	1	1
Other sciences	4	2	2	2	2	3	3	9

[1] In past surveys, the year assigned to a survey reflected the year that the survey report was published. For example, the 1998 survey was published in 1998 while the data were collected for 1997. Starting with the 1999 survey, the survey year reflects the year of the current amount of space.

[2] Comparisons are based on institutions that provided data for both years. Calculations are based on unrounded numbers.

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 2. Geographic distribution of academic science and engineering research space, by field: 1999 [1] (revised)

Field	Net assignable square feet [in millions]					EPSCoR states[2]	IDeA states[3]
	All states	Northeast	Midwest	South	West		
All fields	147.6	27.9	38.9	46.3	33.8	18.3	20.6
Biological sciences							
In medical schools	12.4	3.1	3.1	4.5	1.6	1.3	1.3
Outside medical schools	19.3	3.5	5.4	5.1	5.1	2.3	2.3
Medical sciences							
In medical schools	18.8	3.1	4.7	7.2	3.7	2.0	1.7
Outside medical schools	7.5	1.8	2.2	1.9	1.6	0.9	0.8
Agricultural sciences	24.0	2.7	8.3	8.2	4.7	5.0	6.0
Engineering	24.1	4.1	5.9	8.2	5.8	2.6	3.2
Physical sciences	19.0	3.9	4.6	5.4	5.0	1.8	2.2
Earth, atmospheric, and ocean sciences	7.9	1.6	1.3	2.2	2.7	1.1	1.6
Social sciences	4.9	1.2	1.0	1.3	1.3	0.5	0.5
Psychology	3.5	0.9	0.8	0.8	1.0	0.3	0.4
Computer sciences	2.4	0.8	0.6	0.4	0.6	0.1	0.2
Mathematics	0.9	0.3	0.2	0.2	0.2	0.1	0.2
Other sciences	3.1	1.0	0.7	0.8	0.6	0.3	0.3

[1] Guam and Puerto Rico are excluded from the regions but are included in other table columns where appropriate.

[2] States in which institutions are eligible for the National Science Foundation's Experimental Program to Stimulate Competitive Research.

[3] States in which institutions are eligible for grants from the Institutional Development Award program of the National Institutes of Health.

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 3. Institutional distribution of academic science and engineering research space, by field and type of institution: 1999 (revised)

Field	Net assignable square feet [in millions]					
			Control		Minority-serving institutions	
	All institutions	Field leaders[1]	Private	Public	HBCUs	Hispanic-serving institutions[2]
All fields	147.6	N/A	36.3	111.3	2.6	3.2
Biological sciences						
In medical schools	12.4	3.0	5.9	6.5	0.2	0.2
Outside medical schools	19.3	4.5	4.2	15.1	0.3	0.4
Medical sciences						
In medical schools	18.8	5.9	7.3	11.4	0.1	0.2
Outside medical schools	7.5	2.8	1.6	5.9	0.1	0.1
Agricultural sciences	24.0	13.6	1.2	22.7	0.7	0.2
Engineering	24.1	6.6	5.3	18.8	0.6	1.0
Physical sciences	19.0	3.8	5.3	13.7	0.4	0.5
Earth, atmospheric, and ocean sciences	7.9	2.6	1.4	6.5	0.1	0.1
Social sciences	4.9	1.9	0.8	4.0	*	0.1
Psychology	3.5	0.7	0.9	2.6	*	0.1
Computer sciences	2.4	1.0	0.9	1.4	0.2	0.1
Mathematics	0.9	0.3	0.3	0.6	*	*
Other sciences	3.1	1.8	1.1	2.0	*	0.2

[1] Field leaders are the 10 institutions with the most research space in a given field.

[2] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic.

KEY: HBCUs = Historically Black Colleges and Universities
N/A = not applicable
* = rounds to zero

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 4. Institutions with leased academic science and engineering research space, by field and type of institution: 1999 (revised)

Field	Percent of institutions						
				Control		Minority-serving institutions	
	All institutions	Doctorate granting institutions	Field leaders[1]	Public	Private	HBCUs	Hispanic-serving institutions[2]
All fields	27.5	39.2	N/A	28.5	25.8	5.7	13.6
Biological sciences							
In medical schools	6.5	9.8	60.0	6.0	7.3	1.9	0.0
Outside medical schools	6.0	9.1	40.0	8.0	2.6	0.0	0.0
Medical sciences							
In medical schools	11.5	17.4	90.0	9.6	14.6	3.8	4.5
Outside medical schools	7.0	10.2	50.0	8.8	4.0	1.9	0.0
Agricultural sciences	2.5	3.4	40.0	3.6	0.7	0.0	0.0
Engineering	8.0	11.7	60.0	10.8	3.3	1.9	4.5
Physical sciences	3.5	5.3	30.0	4.8	1.3	0.0	0.0
Earth, atmospheric, and ocean sciences	4.3	6.0	20.0	6.8	0.0	0.0	0.0
Social sciences	3.8	5.3	30.0	4.8	2.0	0.0	0.0
Psychology	2.5	3.8	10.0	2.4	2.6	0.0	0.0
Computer sciences	2.3	3.4	30.0	2.4	2.0	0.0	4.5
Mathematics	1.0	1.5	10.0	1.2	0.7	0.0	0.0
Other sciences	3.0	3.4	30.0	2.4	4.0	1.9	4.5

[1] Field leaders are the 10 institutions with the most research space in a given field.

[2] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic.

KEY: HBCUs = Historically Black Colleges and Universities
N/A = not applicable

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 5. Leased academic science and engineering research space, by type of institution: 1999 (revised)

Type of institution	Total S&E research space [NASF in millions]	Leased S&E research space [NASF in millions]	Percent of space leased
All academic institutions	147.6	7.2	4.9
Doctorate-granting institutions	141.1	7.2	5.1
Nondoctorate-granting institutions	6.5	*	0.7
Control			
Public	111.3	5.5	4.9
Private	36.3	1.8	4.9
Minority-serving institutions	5.8	0.1	1.5
HBCUs	2.6	*	1.4
Hispanic-serving institutions[1]	3.2	*	1.5

[1] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic.

KEY: HBCUs = Historically Black Colleges and Universities
NASF = net assignable square feet
S&E = science and engineering
* = rounds to zero

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 6. Quality of academic science and engineering research space, by field: 1999 (revised)

Field	Total NASF [in millions][1]	Percent of net assignable square feet (NASF)			
		Suitable for		Requiring	
		The most scientifically competitive research	Most levels of research	Major repair or renovation	Replacement
All fields	142.0	41.0	33.2	19.4	6.2
Biological sciences					
In medical schools	11.9	48.5	26.9	18.8	5.9
Outside medical schools	18.5	41.1	30.4	22.2	6.2
Medical sciences					
In medical schools	18.3	43.2	27.5	22.4	6.9
Outside medical schools	7.2	31.8	41.8	20.1	6.2
Agricultural sciences	23.5	32.5	35.2	22.6	9.8
Engineering	23.1	44.6	34.7	15.5	5.2
Physical sciences	18.3	39.8	36.5	19.1	4.6
Earth, atmospheric, and ocean sciences	7.2	38.3	34.1	21.3	6.3
Social sciences	4.3	42.9	39.3	14.5	3.4
Psychology	3.3	38.7	39.0	18.3	4.0
Computer sciences	2.3	42.7	34.8	15.2	7.3
Mathematics	0.9	51.6	33.6	11.9	2.9
Other sciences	3.0	69.7	19.0	9.0	2.2

[1] NASF is the amount of NASF located at only those institutions which also rated the quality of their space for their current research program. Consequently, there may be small variations in the amount of NASF and the NASF amounts in other tables.

NOTES: Components may not add to totals due to rounding.
Quality was assessed relative to current research program.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 7. Academic institutions requiring major repair/renovation or replacement of science and engineering research space, by field and amount of space: 1999 (revised)

Field	Percent of institutions requiring[1]			
	Major repair or renovation		Replacement	
	25 percent or more of total research space	10 percent or less of total research space	25 percent or more of total research space	10 percent or less of total research space
All fields	29.6	19.3	7.0	27.8
Biological sciences				
In medical schools	22.8	16.8	8.9	13.9
Outside medical schools	38.2	14.2	11.2	9.8
Medical sciences				
In medical schools	26.9	13.9	6.5	12.0
Outside medical schools	24.9	13.3	7.2	12.7
Agricultural sciences	29.7	15.4	11.0	16.5
Engineering	23.1	15.1	10.7	17.3
Physical sciences	36.7	11.1	9.6	10.5
Earth, atmospheric, and ocean sciences	28.8	9.5	7.8	6.6
Social sciences	21.0	11.5	6.3	7.1
Psychology	27.8	14.9	7.6	6.6
Computer sciences	20.4	10.2	6.8	3.8
Mathematics	12.8	9.4	4.7	2.1
Other sciences	17.2	11.1	5.1	4.0

[1] Figures are based on only those institutions with space in a given field.

NOTE: Space was assessed for current research program commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 8. Quality of academic science and engineering research space, by type of institution: 1999 (revised)

Type of institution	NASF [in millions][1]	Percent of total net assignable square feet (NASF)			
		Suitable for		Requiring	
		The most scientifically competitive research	Most levels of research	Major repair or renovation	Replacement
All academic institutions	142.0	41.0	33.2	19.4	6.2
Doctorate-granting institutions	135.9	41.7	33.0	19.3	5.8
Nondoctorate-granting institutions	6.1	22.4	38.6	21.6	15.5
Control					
Public	106.6	40.0	33.0	20.4	6.4
Private	35.4	44.0	33.8	16.1	5.8
Minority-serving institutions	5.6	35.2	35.9	17.0	11.7
HBCUs	2.4	21.8	41.1	20.1	16.8
Hispanic-serving institutions[2]	3.2	45.9	31.7	14.5	7.6

[1] NASF is the amount of NASF located at only those institutions which also rated the quality of their space for their current research program. Consequently, there may be small variations in the amount of NASF in this table and the NASF amounts in other tables.

[2] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic.

KEY: HBCUs = Historically Black Colleges and Universities

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 9. Academic institutions requiring major repair/renovation or replacement of science and engineering research space, by type of institution and amount of space: 1999 (revised)

Type of institution	Percent of institutions requiring			
	Major repair or renovation		Replacement	
	25 percent or more of total research space	10 percent or less of total research space	25 percent or more of total research space	10 percent or less of total research space
All academic institutions	29.6	19.3	7.0	27.8
Doctorate-granting institutions	25.4	20.8	3.4	36.0
Nondoctorate-granting institutions	37.8	16.3	14.1	11.9
Control				
Public	32.3	18.5	8.5	29.4
Private	25.2	20.5	4.6	25.2
Minority-serving institutions	28.0	24.0	18.7	22.7
HBCUs	34.0	20.8	18.9	17.0
Hispanic-serving institutions[1]	13.6	31.8	18.2	36.4

[1] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic.

KEY: HBCUs = Historically Black Colleges and Universities

NOTE: Space was assessed for current research program commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 10. Academic science and engineering research space needs, by field: 1999 (revised)

Field	Net assignable square feet (NASF) [in millions]		
	Available space in 1999[1]	Available space needing replacement[1]	Additional space needed
All fields	142.0	8.7	37.1
Biological sciences			
In medical schools	11.9	0.7	4.3
Outside medical schools	18.5	1.1	5.2
Medical sciences			
In medical schools	18.3	1.2	5.6
Outside medical schools	7.2	0.4	2.4
Agricultural sciences	23.5	2.3	2.6
Engineering	23.1	1.2	5.7
Physical sciences	18.3	0.8	3.8
Earth, atmospheric, and ocean sciences	7.2	0.4	1.7
Social sciences	4.3	0.1	1.3
Psychology	3.3	0.1	1.1
Computer sciences	2.3	0.2	2.0
Mathematics	0.9	0.0	0.6
Other sciences	3.0	0.1	0.7

[1] Available space is the amount of NASF located at only those institutions which also rated the quality of their research space for their current research program. Consequently, there may be small variations in the amount of NASF and the NASF amounts in other tables.

NOTES: Components may not add to totals due to rounding.
Space was assessed for current research program commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 11. Institutions needing additional academic science and engineering research space, by field: 1999[1] (revised)

Field	Percent of institutions needing additional space of		
	Less than 10 percent of current space[2]	10 to 25 percent of current space	More than 25 percent of current space
All fields	23.8	19.8	39.3
Biological sciences			
In medical schools	10.8	16.7	29.4
Outside medical schools	13.9	11.5	38.5
Medical sciences			
In medical schools	10.1	16.5	35.8
Outside medical schools	7.2	10.5	29.3
Agricultural sciences	17.6	11.0	20.9
Engineering	13.8	12.9	32.0
Physical sciences	13.6	14.5	31.2
Earth, atmospheric, and ocean sciences	9.9	11.1	28.8
Social sciences	9.9	9.5	30.6
Psychology	8.3	8.0	37.5
Computer sciences	3.8	8.9	48.9
Mathematics	6.0	5.1	28.6
Other sciences	5.1	10.1	20.2

[1] Figures are based on only those institutions with research space in a given field.

[2] Does not include those institutions indicating that no additional space was needed.

NOTE: Amount of space needed was assessed relative to current research commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 12. Academic science and engineering research space needs, by region [1]: 1999 (revised)

Region/states	Net assignable square feet [in millions]		
	Total NASF[2]	Available space needing replacement[2]	Additional space needed
All regions	142.0	8.7	37.1
Northeast	25.0	1.8	6.7
South	45.0	2.6	14.0
Midwest	38.7	2.5	8.0
West	32.6	1.7	8.1
EPSCoR[3] states	17.7	1.5	5.5

[1] Guam and Puerto Rico are excluded from the regions but are included in other table rows where appropriate.

[2] Net assignable square feet (NASF) is the amount of NASF located at only those institutions which also rated the quality of their space for their current research program. Consequently, there may be small variations in the amount of NASF and the NASF amounts in other tables.

[3] States eligible for the National Science Foundation's Experimental Program to Stimulate Competitive Research.

NOTES: Components may not add to totals due to rounding.
Space was assessed for current research program commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 13. Academic science and engineering research space needs, by type of institution: 1999 (revised)

Type of institution	Net assignable square feet [in millions]		
	Total NASF[1]	Available space needing replacement[1]	Additional space needed
All academic institutions	142.0	8.7	37.1
Doctorate-granting institutions	135.9	7.8	32.1
Nondoctorate-granting institutions	6.1	0.9	5.0
Control			
Public	106.6	6.7	28.2
Private	35.4	2.0	8.9
Minority-serving institutions	5.6	0.6	4.7
HBCUs	2.4	0.4	3.4
Hispanic-serving institutions[2]	3.2	0.2	1.3

[1] Net assignable square feet (NASF) is the amount of NASF located at only those institutions which also rated the quality of their space for their current research program. Consequently, there may be small variations in the amount of NASF and the NASF amounts in other tables.

[2] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic.

KEY: HBCUs = Historically Black Colleges and Universities

NOTES: Components may not add to totals due to rounding.
Space was assessed for current research program commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 14. Repair or renovation of academic science and engineering research space, by field: FYs 1998-2001 (revised)

Field	Net assignable square feet [in millions]			
	Available in FY 1999[1]		Repair or renovation	
	Total NASF	Needing major repair or renovation	Started in FYs 1998 or 1999	Planned to start in FYs 2000 or 2001
All fields	142.0	27.0	17.9	14.2
Biological sciences				
In medical schools	11.9	2.1	2.4	2.2
Outside medical schools	18.5	4.1	2.2	2.1
Medical sciences				
In medical schools	18.3	3.8	1.6	2.3
Outside medical schools	7.2	1.4	1.2	0.8
Agricultural sciences	23.5	5.4	0.8	0.4
Engineering	23.1	3.6	2.9	1.4
Physical sciences	18.3	3.4	2.1	1.9
Earth, atmospheric, and ocean sciences	7.2	1.5	1.0	0.6
Social sciences	4.3	0.6	0.9	0.8
Psychology	3.3	0.6	0.7	0.4
Computer sciences	2.3	0.3	0.3	0.2
Mathematics	0.9	0.1	0.5	0.6
Other sciences	3.0	0.3	1.3	0.3

[1] Net assignable square feet (NASF) is the amount of NASF located at only those institutions which also rated the quality of their space for their current research program. Consequently, there may be small variations in the amount of NASF and the NASF in other tables.

NOTES: Components may not add to totals due to rounding.
Space was assessed for current research program commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 15. Repair or renovation of academic science and engineering research space, by type of institution: FYs 1998-2001 (revised)

Type of institution	Net assignable square feet [in millions]			
	Available in FY 1999[1]		Repair or renovation	
	Total NASF	Needing major repair or renovation	Started in FYs 1998 or 1999	Planned to start in FYs 2000 or 2001
All academic institutions	142.0	27.0	17.9	14.2
Doctorate-granting institutions	135.9	25.7	17.1	12.6
Nondoctorate-granting institutions	6.1	1.2	0.8	1.6
Control				
Public	106.6	21.5	12.4	10.2
Private	35.4	5.5	5.4	4.1
Minority-serving institutions	5.6	0.9	0.9	0.6
HBCUs	2.4	0.5	0.5	0.2
Hispanic-serving institutions[2]	3.2	0.4	0.4	0.5

[1] Net assignable square feet (NASF) is the amount of NASF located at only those institutions which also rated the quality of their space for their current research program. Consequently, there may be small variations in the amount of NASF and the NASF in other tables.

[2] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic.

KEY: HBCUs = Historically Black Colleges and Universities

NOTES: Components may not add to totals due to rounding.
Space was assessed for current research program commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 16. New construction of academic science and engineering research space, by field: FYs 1998-2001 (revised)

Field	Net assignable square feet [in millions]			
	Available in FY 1999[1]		New construction	
	Total NASF	Needing replacement	Started in FYs 1998 or 1999	Planned to start in FYs 2000 or 2001
All fields	142.0	8.7	10.3	17.5
Biological sciences				
In medical schools	11.9	0.7	0.9	2.8
Outside medical schools	18.5	1.1	1.3	2.4
Medical sciences				
In medical schools	18.3	1.2	1.2	2.5
Outside medical schools	7.2	0.4	1.0	1.7
Agricultural sciences	23.5	2.3	1.2	1.2
Engineering	23.1	1.2	1.7	2.5
Physical sciences	18.3	0.8	1.3	1.3
Earth, atmospheric, and ocean sciences	7.2	0.4	0.4	0.7
Social sciences	4.3	0.1	0.2	0.3
Psychology	3.3	0.1	0.1	0.5
Computer sciences	2.3	0.2	0.3	0.6
Mathematics	0.9	0.0	0.1	0.1
Other sciences	3.0	0.1	0.5	1.0

[1] Net assignable square feet (NASF) is the amount of NASF located at only those institutions which also rated the quality of their space for their current research program. Consequently, there may be small variations in the amount of NASF and the NASF amounts in other tables.

NOTES: Components may not add to totals due to rounding.
Space was assessed for current research program commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 17. New construction of academic science and engineering research space, by type of institution: FYs 1998-2001 (revised)

Type of institution	Net assignable square feet [in millions]			
	Available in FY 1999[1]		New construction	
	Total NASF	Needing replacement	Started in FYs 1998 or 1999	Planned to start in FYs 2000 or 2001
All academic institutions	142.0	8.7	10.3	17.5
Doctorate-granting institutions	135.9	7.8	9.2	15.9
Nondoctorate-granting institutions	6.1	0.9	1.1	1.5
Control				
Public	106.6	6.7	7.8	12.2
Private	35.4	2.0	2.4	5.3
Minority-serving institutions	5.6	0.6	0.7	0.9
HBCUs	5.6	0.6	0.5	0.4
Hispanic-serving institutions[2]	3.2	0.2	0.2	0.5

[1] Net assignable square feet (NASF) is the amount of NASF located at only those institutions which also rated the quality of their space for their current research program. Consequently, there may be small variations in the amount of NASF and the NASF amounts in other tables.

[2] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic.

KEY: HBCUs = Historically Black Colleges and Universities

NOTES: Components may not add to totals due to rounding.
Space was assessed for current research program commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 18. Cost to repair or renovate academic science and engineering research space, by field: 1998-2001 (revised)

Field	Cost of repair and renovation [in millions of current dollars]			
	Started in FYs 1998 or 1999	Planned		Deferred and not included in institutional plan
		To start in FYs 2000 or 2001	To start after FY 2001	
All fields	1,792	2,175	3,861	1,829
Biological sciences				
In medical schools	244	391	167	261
Outside medical schools	278	278	517	238
Medical sciences				
In medical schools	247	579	429	181
Outside medical schools	100	123	140	97
Agricultural sciences	40	35	227	133
Engineering	333	116	673	246
Physical sciences	218	345	772	317
Earth, atmospheric, and ocean sciences	84	53	175	154
Social sciences	107	79	234	67
Psychology	33	62	135	48
Computer sciences	24	31	34	47
Mathematics	21	54	73	21
Other sciences	64	29	285	19

NOTES: Components may not add to totals due to rounding.

A deferred project refers to a repair/renovation or new construction project that: is necessary to meet your current S&E research program commitments; is not scheduled for your FYs 2000 or 2001; does not have funding; and is neither for the purpose of developing new programs nor for expanding faculty beyond what is required to fulfill current S&E research program commitments. Includes only projects over $100,000.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 19. Cost of new construction of academic science and engineering research space, by field: 1998-2001 (revised)

Field	Cost of new construction [in millions of current dollars]			
		Planned		Deferred and not included in institutional plan
	Started in FYs 1998 or 1999	To start in FYs 2000 or 2001	To start after FY 2001	
All fields	3,222	7,928	9,242	2,150
Biological sciences				
In medical schools	292	1,470	519	130
Outside medical schools	489	1,068	1,646	236
Medical sciences				
In medical schools	506	1,246	1,642	369
Outside medical schools	375	1,218	1,044	348
Agricultural sciences	224	259	674	141
Engineering	416	843	965	184
Physical sciences	419	617	957	200
Earth, atmospheric, and ocean sciences	149	248	359	157
Social sciences	55	93	185	191
Psychology	49	207	52	29
Computer sciences	75	226	441	123
Mathematics	13	31	99	15
Other sciences	159	403	659	25

NOTES: Components may not add to totals due to rounding.

All projects are greater than $100,000, except for those projects deferred and not in institutional plan.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 20. Cost to repair or renovate academic science and engineering space, by type of institution: 1998-2001 (revised)

Type of institution	Cost of repairs and renovation [in millions of current dollars]			
		Planned		Deferred and not included in institutional plan
	Started in FYs 1998 or 1999	To start in FYs 2000 or 2001	To start after FY 2001	
All academic institutions	1,792	2,175	3,861	1,829
Doctorate-granting institutions	1,697	1,997	3,557	1,776
Nondoctorate-granting institutions	94	178	305	53
Control				
Public	1,089	1,080	3,191	1,126
Private	703	1,095	671	703
Minority-serving institutions	75	50	60	12
HBCUs	58	14	43	5
Hispanic-serving institutions[1]	17	35	17	6

[1] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic.

KEY: HBCUs = Historically Black Colleges and Universities

NOTES: Components may not add to totals due to rounding.
All projects are greater than $100,000, except for those projects deferred and not in institutional plan.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 21. Cost of new construction of academic science and engineering space, by type of institution: 1998-2001 (revised)

Type of institution	Cost of new construction [in millions of current dollars]			
	Started in FYs 1998 or 1999	Planned		Deferred and not included in institutional plan
		To start in FYs 2000 or 2001	To start after FY 2001	
All academic institutions	3,222	7,928	9,242	2,150
Doctorate-granting institutions	2,971	7,404	8,563	1,980
Nondoctorate-granting institutions	251	523	679	171
Control				
Public	2,242	5,159	7,051	1,705
Private	980	2,768	2,190	445
Minority-serving institutions	196	202	443	167
HBCUs	159	108	210	61
Hispanic-serving institutions[1]	38	94	233	106

[1] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic.

KEY: HBCUs = Historically Black Colleges and Universities

NOTES: Components may not add to totals due to rounding.
All projects are greater than $100,000, except for those projects deferred and not in institutional plan.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 22. Source of funds for repair and renovation of academic science and engineering research space, by type of institution: 1998-99 (revised)

Type of institution	Total funding [in millions of dollars][1]	Percent of total funding						
		Government		Private donations	Institutional funds[2]	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
All academic institutions	1,665	4.1	28.6	11.5	37.2	13.5	4.2	0.8
Doctorate-granting institutions	1,576	3.9	28.3	9.9	38.3	14.3	4.5	0.8
Nondoctorate-granting institutions	89	8.2	33.2	40.0	16.6	0.0	0.0	2.1
Control								
Public	976	5.4	47.5	6.7	35.0	5.1	0.0	0.3
Private	689	2.3	1.8	18.3	40.3	25.5	10.2	1.6
Minority-serving institutions	39	23.0	59.0	4.1	13.9	0.0	0.0	0.0
HBCUs	22	30.4	51.9	7.4	10.3	0.0	0.0	0.0
Hispanic-serving institutions[3]	17	13.4	68.0	0.0	18.6	0.0	0.0	0.0

[1] Several institutions provided inconsistent information about the costs of new construction and repair/renovation and the source of these funds for the period 1998-99. Consequently, the table data for sources of funding may not be consistent with table data on construction and repair/renovation costs.

[2] Institutional funds include an institution's operating funds, endowment, and indirect costs recovered from grants and contracts

[3] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic

KEY: HBCUs = Historically Black Colleges and Universities

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 23. Source of funds for new construction of academic science and engineering research space, by type of institution: 1998-99 (revised)

Type of institution	Total funding [in millions of dollars][1]	Percent of total funding						
		Government		Private donations	Institutional funds[2]	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
All academic institutions	2,765	8.6	34.0	13.7	23.3	17.1	2.1	1.3
Doctorate-granting institutions	2,563	8.0	33.9	13.7	24.7	16.1	2.3	1.3
Nondoctorate-granting institutions	203	15.7	34.5	13.4	5.6	29.8	*	1.0
Control								
Public	1,810	11.2	43.5	10.4	19.3	12.1	1.7	1.7
Private	955	3.7	15.8	19.9	30.8	26.6	2.8	0.4
Minority-serving institutions	104	40.1	43.5	7.4	6.8	2.2	*	0.0
HBCUs	66	40.5	46.4	11.7	1.4	0.0	0.1	0.0
Hispanic-serving institutions[3]	38	39.5	38.3	0.0	16.3	5.9	0.0	0.0

[1] Several institutions provided inconsistent information about the costs of new construction and repair/renovation and the source of these funds for the period 1998-99. Consequently, the table data for sources of funding may not be consistent with table data on construction and repair/renovation costs.

[2] Institutional funds include an institution's operating funds, endowment, and indirect costs recovered from Federal grants and contracts

[3] Institutions where at least 25 percent of the undergraduate full-time equivalent enrollment is Hispanic

KEY: HBCUs = Historically Black Colleges and Universities
* = rounds to zero

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 24. Trends in sources of funding for the construction of academic science and engineering research facilities, by type of institution: 1986-99 (revised)

Year of project start and type of institution	Current dollars [in millions]							
	All sources	Governments		Private donations	Institutional funds[1]	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
1986 or 1987								
Total	2,050.6	145.4	779.1	487.5	289.8	313.1	3.1	31.9
Doctorate-granting	1,887.7	129.9	690.4	462.5	289.2	280.1	3.1	31.9
Nondoctorate-granting	162.9	15.5	88.7	25.1	0.6	33.1	0.0	0.0
1988 or 1989								
Total	2,464.5	352.0	890.7	459.2	343.8	320.2	95.9	0.8
Doctorate-granting	2,315.0	339.0	807.3	411.7	338.3	320.2	95.9	0.8
Nondoctorate-granting	149.5	13.0	83.4	47.5	5.6	0.0	0.0	0.0
1990 or 1991								
Total	2,975.6	476.3	956.6	352.6	394.1	727.5	35.4	33.1
Doctorate-granting	2,847.3	465.5	947.9	348.0	390.3	627.0	35.4	33.1
Nondoctorate-granting	128.4	10.8	8.7	4.6	3.8	100.5	0.0	0.0
1992 or 1993								
Total	2,810.8	459.3	968.0	301.0	374.3	620.3	39.0	50.0
Doctorate-granting	2,720.0	452.0	893.0	297.0	374.0	616.0	39.0	48.0
Nondoctorate-granting	91.8	7.3	75.0	4.0	0.3	4.3	0.0	2.0
1994 or 1995								
Total	2,767.6	206.5	1,180.8	360.0	442.0	426.1	145.7	6.5
Doctorate-granting	2,436.9	201.2	890.4	344.0	437.5	411.6	145.7	6.5
Nondoctorate-granting	330.6	5.2	290.5	16.0	4.4	14.5	0.0	0.0
1996 or 1997								
Total	3,110.3	270.9	966.6	596.6	593.1	553.0	106.6	23.5
Doctorate-granting	2,843.2	268.3	880.6	517.8	592.9	488.1	73.2	22.3
Nondoctorate-granting	267.1	2.5	86.0	78.8	0.2	65.0	33.4	1.2
1998 or 1999[2]								
Total	2,765.4	237.8	939.0	379.4	644.2	472.1	57.9	35.0
Doctorate-granting	2,562.5	206.0	869.1	352.3	632.8	411.6	57.8	32.9
Nondoctorate-granting	202.9	31.8	69.9	27.2	11.4	60.5	*	2.0

[1] Funding for research activities from the institution's operating funds, endowments, indirect costs recovered from Federal grants and/or contracts, indirect costs recovered from other sources, etc.

[2] Several institutions provided inconsistent information about the costs of new construction and repair/renovation and the source of these funds for 1998 or 1999. Consequently, the table data for sources of funding may not be consistent with table data on construction and repair/renovation costs.

KEY: * = rounds to zero

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 25. Trends in sources of funding at public institutions for the construction of academic science and engineering research facilities, by type of institution: 1986-99 (revised)

Year of project start and type of institution	Current dollars [in millions]							
	All sources	Governments		Private donations	Institutional funds[1]	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
1986 or 1987								
Total	1,354.8	40.3	754.5	259.1	109.2	189.5	2.4	0.2
Doctorate-granting	1,220.4	31.4	665.9	238.6	109.2	173.1	2.4	0.2
Nondoctorate-granting	134.4	8.9	88.5	20.6	0.0	16.4	0.0	0.0
1988 or 1989								
Total	1,727.0	274.3	838.4	192.9	256.3	154.5	8.1	0.6
Doctorate-granting	1,625.6	268.3	755.0	184.8	252.4	154.6	8.1	0.6
Nondoctorate-granting	101.4	6.0	83.4	8.1	3.9	0.0	0.0	0.0
1990 or 1991								
Total	2,020.0	388.1	809.4	139.1	270.2	398.6	7.8	6.9
Doctorate-granting	1,906.4	382.3	800.7	139.1	270.2	299.4	7.8	6.9
Nondoctorate-granting	113.7	5.8	8.7	0.0	0.0	99.2	0.0	0.0
1992 or 1993								
Total	2,016.4	325.8	929.8	152.5	198.3	390.5	16.2	3.3
Doctorate-granting	1,929.9	320.1	854.4	152.5	198.1	386.9	16.2	1.7
Nondoctorate-granting	86.4	5.7	75.4	0.0	0.2	3.6	0.0	1.6
1994 or 1995								
Total	1,872.3	115.4	1,164.6	123.9	142.4	306.1	13.5	6.5
Doctorate-granting	1,578.1	112.5	874.0	123.9	141.6	306.1	13.5	6.5
Nondoctorate-granting	294.2	3.0	290.5	0.0	0.8	0.0	0.0	0.0
1996 or 1997								
Total	1,988.7	201.0	940.2	267.3	249.3	259.7	54.4	16.9
Doctorate-granting	1,812.7	198.4	863.2	262.0	249.3	203.1	21.0	15.7
Nondoctorate-granting	176.0	2.5	77.0	5.3	0.0	56.6	33.4	1.2
1998 or 1999[2]								
Total	1,810.1	202.6	787.8	188.9	349.9	218.2	31.2	31.4
Doctorate-granting	1,665.3	179.5	718.0	187.5	338.9	178.9	31.2	31.4
Nondoctorate-granting	144.8	23.1	69.9	1.3	11.0	39.4	*	0.0

[1] Funding for research activities from the institution's operating funds, endowments, indirect costs recovered from Federal grants and/o contracts, indirect costs recovered from other sources, etc.

[2] Several institutions provided inconsistent information about the costs of new construction and repair/renovation and the source of thes funds for 1998 or 1999. Consequently, the table data for sources of funding may not be consistent with table data on construction and repair/renovation costs.

KEY: * = rounds to zero

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 26. Trends in sources of funding at private institutions for the construction of academic science and engineering research facilities, by type of institution: 1986-99 (revised)

Year of project start and type of institution	Current dollars [in millions]							
	All sources	Governments		Private donations	Institutional funds[1]	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
1986 or 1987								
Total	695.8	105.1	24.6	228.4	180.6	123.6	0.7	31.7
Doctorate-granting	667.3	98.5	24.5	223.9	180.0	107.0	0.7	31.7
Nondoctorate-granting	28.5	6.6	0.2	4.5	0.6	16.7	0.0	0.0
1988 or 1989								
Total	737.5	77.7	52.3	266.3	87.5	165.7	87.8	0.2
Doctorate-granting	689.4	70.7	52.3	226.9	85.9	165.6	87.8	0.2
Nondoctorate-granting	48.1	7.0	0.0	39.4	1.7	0.0	0.0	0.0
1990 or 1991								
Total	955.6	88.2	147.2	213.5	123.9	328.9	27.6	26.2
Doctorate-granting	940.9	83.2	147.2	208.9	120.1	327.6	27.6	26.2
Nondoctorate-granting	14.7	5.0	0.0	4.6	3.8	1.3	0.0	0.0
1992 or 1993								
Total	795.5	133.5	38.8	148.5	176.1	229.6	22.7	46.4
Doctorate-granting	789.7	132.2	38.8	144.6	175.8	229.3	22.7	46.4
Nondoctorate-granting	5.8	1.3	0.0	3.9	0.3	0.3	0.0	0.0
1994 or 1995								
Total	895.2	91.0	16.3	236.1	299.5	120.0	132.2	0.0
Doctorate-granting	858.8	88.8	16.3	220.1	295.9	105.5	132.2	0.0
Nondoctorate-granting	36.3	2.2	0.0	16.0	3.6	14.5	0.0	0.0
1996 or 1997								
Total	1,121.6	69.9	26.4	329.4	343.8	293.4	52.2	6.6
Doctorate-granting	1,030.5	69.9	17.4	255.9	343.6	285.0	52.2	6.6
Nondoctorate-granting	91.1	0.0	9.0	73.5	0.2	8.4	0.0	0.0
1998 or 1999[2]								
Total	955.3	35.2	151.2	190.6	294.2	253.9	26.7	3.6
Doctorate-granting	897.2	26.5	151.1	164.8	293.9	232.7	26.7	1.5
Nondoctorate-granting	58.1	8.7	0.1	25.8	0.4	21.1	0.0	2.0

[1] Funding for research activities from the institution's operating funds, endowments, indirect costs recovered from Federal grants and/or contracts, indirect costs recovered from other sources, etc.

[2] Several institutions provided inconsistent information about the costs of new construction and repair/renovation and the source of these funds for 1998 or 1999. Consequently, the table data for sources of funding may not be consistent with table data on construction and repair/renovation costs.

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 27. Trends in sources of funding for the repair/renovation of academic science and engineering research facilities, by type of institution: 1986-99 (revised)

Year of project start and type of institution	Current dollars [in millions]							
	All sources	Governments		Private donations	Institutional funds[1]	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
1986 or 1987								
Total	837.9	27.3	233.1	101.0	328.0	137.6	3.8	7.4
Doctorate-granting	792.7	23.5	201.7	99.3	325.2	132.2	3.8	7.4
Nondoctorate-granting	45.2	3.7	31.4	1.6	3.0	5.4	0.0	0.0
1988 or 1989								
Total	1,009.5	61.1	233.8	52.1	570.8	69.9	15.9	5.2
Doctorate-granting	979.2	55.9	226.6	42.1	563.6	69.8	15.9	5.2
Nondoctorate-granting	30.3	5.1	7.1	10.0	7.2	0.0	0.0	0.0
1990 or 1991								
Total	825.7	49.0	243.0	100.6	355.4	66.4	8.0	3.2
Doctorate-granting	794.1	48.3	227.3	97.5	346.7	63.2	8.0	3.2
Nondoctorate-granting	31.6	0.7	15.8	3.2	8.7	3.3	0.0	0.0
1992 or 1993								
Total	835.4	56.2	252.4	73.0	332.0	81.0	27.0	16.2
Doctorate-granting	803.0	47.0	244.0	66.0	325.0	79.0	27.0	16.2
Nondoctorate-granting	32.4	9.2	8.4	7.0	7.0	2.0	0.0	0.0
1994 or 1995								
Total	1,058.1	110.7	265.5	110.7	432.7	50.4	78.6	9.3
Doctorate-granting	981.3	101.9	233.0	93.7	423.2	43.8	76.3	9.3
Nondoctorate-granting	76.8	8.8	32.6	17.0	9.5	6.6	2.4	0.0
1996 or 1997								
Total	1,324.5	120.8	338.1	140.6	578.6	84.6	35.7	26.1
Doctorate-granting	1,142.2	96.1	273.2	86.8	568.0	56.3	35.7	26.1
Nondoctorate-granting	182.3	24.7	64.9	53.8	10.6	28.3	0.0	0.0
1998 or 1999[2]								
Total	1,665.2	68.4	476.2	191.6	619.3	225.4	70.4	13.9
Doctorate-granting	1,576.3	61.1	446.7	156.1	604.5	225.4	70.4	12.1
Nondoctorate-granting	88.9	7.3	29.5	35.6	14.8	0.0	0.0	1.8

[1] Funding for research activities from the institution's operating funds, endowments, indirect costs recovered from Federal grants and/or contracts, indirect costs recovered from other sources, etc.

[2] Several institutions provided inconsistent information about the costs of new construction and repair/renovation and the source of these funds for 1998 or 1999. Consequently, the table data for sources of funding may not be consistent with table data on construction and repair/renovation costs.

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 28. Trends in sources of funding at public institutions for the repair/renovation of academic science and engineering research facilities, by type of institution: 1986-99 (revised)

Year of project start and type of institution	Current dollars [in millions]							
	All sources	Governments		Private donations	Institutional funds[1]	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
1986 or 1987								
Total	435.9	13.2	226.6	15.0	155.1	25.5	0.3	0.2
Doctorate-granting	399.3	10.9	195.1	14.3	153.4	25.0	0.3	0.2
Nondoctorate-granting	36.5	2.2	31.4	0.6	1.8	0.5	0.0	0.0
1988 or 1989								
Total	698.5	31.4	229.3	22.0	403.5	6.6	4.9	0.0
Doctorate-granting	673.9	26.5	222.1	13.9	399.8	6.5	4.9	0.0
Nondoctorate-granting	24.6	4.9	7.1	8.1	3.6	0.0	0.0	0.0
1990 or 1991								
Total	449.3	24.6	233.5	43.8	134.6	12.1	0.0	0.6
Doctorate-granting	431.3	23.9	217.8	43.8	133.1	12.1	0.0	0.6
Nondoctorate-granting	18.0	0.7	15.8	0.0	1.5	0.0	0.0	0.0
1992 or 1993								
Total	520.4	34.3	237.1	24.9	154.4	55.9	1.6	11.9
Doctorate-granting	507.9	31.1	228.5	24.9	153.8	55.9	1.6	11.9
Nondoctorate-granting	12.4	3.2	8.6	0.0	0.6	0.0	0.0	0.0
1994 or 1995								
Total	495.8	38.9	254.4	16.0	160.8	18.3	0.9	6.5
Doctorate-granting	449.9	31.8	222.3	15.7	154.4	18.3	0.9	6.5
Nondoctorate-granting	45.9	7.1	32.1	0.2	6.5	0.0	0.0	0.0
1996 or 1997								
Total	669.6	72.4	328.3	38.3	179.6	25.1	0.3	25.7
Doctorate-granting	580.5	58.2	263.4	36.8	175.6	20.6	0.3	25.7
Nondoctorate-granting	89.1	14.2	64.9	1.5	4.0	4.6	0.0	0.0
1998 or 1999[2]								
Total	976.4	52.8	463.6	65.8	341.6	49.4	0.1	3.1
Doctorate-granting	938.1	48.0	435.8	64.8	336.9	49.4	0.1	3.1
Nondoctorate-granting	38.3	4.8	27.9	0.9	4.7	0.0	0.0	0.0

[1] Funding for research activities from the institution's operating funds, endowments, indirect costs recovered from Federal grants and/o contracts, indirect costs recovered from other sources, etc.

[2] Several institutions provided inconsistent information about the costs of new construction and repair/renovation and the source of these funds for 1998 or 1999. Consequently, the table data for sources of funding may not be consistent with table data on construction and repair/renovation costs.

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 29. Trends in sources of funding at private institutions for the repair/renovation of academic science and engineering research facilities, by type of institution: 1986-99 (revised)

Year of project start and type of institution	Current dollars [in millions]							
	All sources	Governments		Private donations	Institutional funds[1]	Tax-exempt bonds	Other debt	Other sources
		Federal	State/Local					
1986 or 1987								
Total	402.0	14.1	6.5	86.0	172.9	112.1	3.5	7.2
Doctorate-granting	393.4	12.6	6.6	85.0	171.8	107.2	3.5	7.2
Nondoctorate-granting	8.6	1.5	0.0	1.0	1.2	4.9	0.0	0.0
1988 or 1989								
Total	311.0	29.7	4.5	30.1	167.3	63.3	11.0	5.2
Doctorate-granting	305.3	29.4	4.5	28.2	163.8	63.3	11.0	5.2
Nondoctorate-granting	5.7	0.2	0.0	1.9	3.6	0.0	0.0	0.0
1990 or 1991								
Total	376.4	24.4	9.5	56.8	220.8	54.3	8.0	2.6
Doctorate-granting	362.8	24.4	9.5	53.7	213.6	51.1	8.0	2.6
Nondoctorate-granting	13.6	0.0	0.0	3.2	7.2	3.3	0.0	0.0
1992 or 1993								
Total	314.6	21.8	15.0	47.5	176.3	24.5	25.2	4.3
Doctorate-granting	294.7	16.0	15.0	40.7	170.5	22.9	25.2	4.2
Nondoctorate-granting	19.9	5.8	0.0	6.8	5.8	1.6	0.0	0.1
1994 or 1995								
Total	562.3	71.8	11.2	94.8	271.9	32.2	77.7	2.8
Doctorate-granting	531.4	70.1	10.7	78.0	268.8	25.6	75.4	2.8
Nondoctorate-granting	30.8	1.6	0.5	16.8	3.0	6.6	2.4	0.0
1996 or 1997								
Total	654.9	48.4	9.8	102.4	399.0	59.5	35.4	0.4
Doctorate-granting	561.7	37.9	9.8	50.1	392.4	35.7	35.4	0.4
Nondoctorate-granting	93.2	10.5	0.0	52.3	6.6	23.7	0.0	0.0
1998 or 1999[2]								
Total	688.8	15.6	12.5	125.8	277.7	176.0	70.3	10.8
Doctorate-granting	638.2	13.2	10.9	91.2	267.6	176.0	70.3	9.0
Nondoctorate-granting	50.6	2.4	1.6	34.6	10.1	0.0	0.0	1.8

[1] Funding for research activities from the institution's operating funds, endowments, indirect costs recovered from Federal grants and/or contracts, indirect costs recovered from other sources, etc.

[2] Several institutions provided inconsistent information about the costs of new construction and repair/renovation and the source of these fund for 1998 or 1999. Consequently, the table data for sources of funding may not be consistent with table data on construction and repair/renovation costs.

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 30. Academic institutions with deferred capital projects to construct or repair/renovate academic science and engineering research facilities, by type of institution, project type and whether the project was included in institutional plans: 1999 (revised)

Type of institution	Percent of institutions with deferred capital projects					
	Included in institutional plans			Not included in institutional plans		
	To construct or repair/renovate S&E research facilities	To construct new S&E research facilities	To repair/ renovate existing S&E research facilities	To construct or repair/renovate S&E research facilities	To construct new S&E research facilities	To repair/ renovate existing S&E research facilities
Total	44	28	36	25	13	20
Doctorate-granting	51	34	43	29	17	23
Top 100 in R&D expenditures[1]	66	51	59	38	17	34
Other	44	26	35	25	16	18
Nondoctorate-granting	30	17	22	18	5	15
Public	51	35	43	27	16	21
Doctorate-granting	61	43	53	32	22	25
Nondoctorate-granting	34	19	24	16	5	13
Private	32	17	25	23	7	20
Doctorate-granting	36	19	27	24	8	20
Nondoctorate-granting	23	13	19	21	6	19

[1] Expenditures are for Fiscal Year 1997.

KEY: S&E = science and engineering

NOTE: A deferred project refers to a repair/renovation or new construction project that: is necessary to meet your current S&E research program commitments; is not scheduled for your FYs 2000 or 2001; does not have funding; and is neither for the purpose of developing new programs nor for expanding faculty beyond what is required to fulfill current S&E research program commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 31. Estimated cost of deferred capital projects to construct or repair/renovate academic science and engineering research facilities, by type of institution, project type and whether the project was included in institutional plans: 1999[1] (revised)

Type of institution	Current dollars [in millions]				
		Deferred capital projects			
		Included in institutional plans		Not included in institutional plans	
	Total	To construct new S&E research facilities	To repair/ renovate existing S&E research facilities	To construct new S&E research facilities	To repair/ renovate existing S&E research facilities
Total	15,820	7,985	3,982	1,812	2,041
Doctorate-granting	14,816	7,573	3,682	1,736	1,825
Top 100 in research expenditures	10,472	5,373	2,891	962	1,246
Other	4,343	2,200	791	774	578
Nondoctorate-granting	1,004	412	299	76	216
Public	13,140	6,477	3,570	1,666	1,427
Doctorate-granting	12,476	6,198	3,382	1,627	1,269
Nondoctorate-granting	664	279	188	39	159
Private	2,679	1,508	412	147	613
Doctorate-granting	2,340	1,374	300	109	556
Nondoctorate-granting	340	134	112	37	57

[1] Figures include costs for central campus infrastructure.

KEY: S&E = science and engineering

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 32. Number of academic institutions with deferred capital projects to construct or repair/renovate science and engineering research facilities, by field, project type and whether the project was included in institutional plans: 1999 (revised)

Field	Institutions with deferred capital projects				
	Total	Included in institutional plans		Not in institutional plans	
		To construct new S&E research facilities	To repair/ renovatexisting S&E research facilities	To construct new S&E research facilities	To repair/ renovate existing S&E research facilities
Total	205	122	144	60	88
Biological sciences					
In medical schools	40	15	25	8	17
Outside medical schools	129	63	81	19	45
Medical sciences					
In medical schools	48	27	31	10	18
Outside medical schools	61	30	34	17	19
Agricultural sciences	47	30	34	7	17
Engineering	94	48	62	18	34
Physical sciences	131	53	91	20	50
Earth, atmospheric, and ocean sciences	71	31	43	16	30
Social sciences	62	22	39	17	30
Psychology	60	14	43	10	30
Computer sciences	70	32	37	22	27
Mathematics	59	20	36	14	25
Other sciences	43	24	24	13	16

KEY: S&E = science and engineering

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 33. Costs of deferred capital projects to construct or repair/renovate academic science and engineering research facilities, by field, project type and whether the project was included in institutional plans: 1999 (revised)

Field	Deferred capital projects [current dollars in millions]				
		Included in institutional plans		Not included in institutional plans	
	Total	To construct new S&E research facilities	To repair/ renovate existing S&E research facilities	To construct new S&E research facilities	To repair/ renovate existing S&E research facilities
Total[1]	17,082	9,242	3,861	2,150	1,829
Biological sciences					
In medical schools	1,078	519	167	130	261
Outside medical schools	2,638	1,646	517	236	238
Medical sciences					
In medical schools	2,621	1,642	429	369	181
Outside medical schools	1,629	1,044	140	348	97
Agricultural sciences	1,174	674	227	141	133
Engineering	2,069	965	673	184	246
Physical sciences	2,247	957	772	200	317
Earth, atmospheric, and ocean sciences	845	359	175	157	154
Social sciences	677	185	234	191	67
Psychology	264	52	135	29	48
Computer sciences	645	441	34	123	47
Mathematics	209	99	73	15	21
Other sciences	989	659	285	25	19

[1] Figures exclude costs for central campus infrastructure.

KEY: S&E = science and engineering

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 34. Amount of instructional and research space in Historically Black Colleges and Universities, by type of space: 1999 (revised)

Type of space	NASF [in millions]	
	Original 29 HBCUs [1]	Expanded HBCUs [2]
Total instructional and research space—all fields	10.8	17.6
S&E instructional and research space	6.8	10.2
S&E research space	1.8	2.6

[1] The original group consists of the same 29 HBCUs surveyed from 1988 through 1999.

[2] The expanded group consists of all research-performing HBCUs, including the 29 original HBCUs.

KEY: HBCUs = Historically Black Colleges and Universities
NASF = net assignable square feet
S&E = science and engineering

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 35. Total amount of science and engineering instructional and research space in the 29 original[1] Historically Black Colleges and Universities, by field: 1988-99[2] (revised)

Field	Total instructional and research NASF [in thousands]							Total research NASF [in thousands]						
	1988	1990	1992	1994	1996	1998	1999	1988	1990	1992	1994	1996	1998	1999
Total	6,077	6,175	6,576	6,084	6,755	6,818	6,831	1,112	1,440	1,782	1,759	1,797	1,885	1,846
Biological sciences														
In medical schools	621	388	388	456	470	513	448	91	121	121	159	150	181	151
Outside medical schools	509	546	621	581	634	663	645	141	170	254	250	208	216	186
Medical sciences														
In medical schools	1,253	810	810	649	872	903	893	141	158	160	69	84	87	110
Outside medical schools	593	956	963	913	719	726	722	37	50	133	134	63	82	76
Agricultural sciences	604	834	783	704	718	786	773	259	433	414	470	451	471	469
Engineering	777	979	1,207	1,136	1,354	1,385	1,407	152	167	285	315	349	363	394
Physical sciences	804	810	1,005	876	939	841	871	179	190	235	212	229	234	267
Earth, atmospheric, and ocean sciences	44	56	85	73	115	121	135	10	26	35	27	42	43	43
Social sciences	304	322	278	233	268	257	207	28	47	57	43	56	46	36
Psychology	119	105	86	106	134	114	124	14	19	16	18	16	16	20
Computer sciences	150	114	160	128	140	159	162	43	30	42	31	36	40	27
Mathematics	173	164	191	158	194	204	218	12	26	29	19	24	20	23
Other sciences	126	91	0	70	198	146	226	4	4	0	12	88	86	44

[1] The original group consists of the same 29 HBCUs surveyed from 1988 through 1999.

[2] In past surveys, the year assigned to a survey reflected the year that the survey report was published. For example, the 1998 survey was published in 1998 while the data were collected for 1997. Starting with the 1999 survey, the survey year reflects the year of the current amount of space.

KEY: HBCUs = Historically Black Colleges and Universities
NASF = net assignable square feet

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 36. Total amount of science and engineering instructional and research space in expanded group [1] of Historically Black Colleges and Universities, by field: 1992-99 [2] (revised)

Field	Total instructional and research NASF [in thousands]					Total research NASF [in thousands]				
	1992	1994	1996	1998	1999	1992	1994	1996	1998	1999
Total	9,095	7,923	8,984	8,734	10,189	2,920	2,197	2,374	2,339	2,629
Biological sciences										
In medical schools	388	456	470	513	452	121	159	150	181	154
Outside medical schools	1,757	1,063	1,182	1,005	1,010	1,137	480	393	305	275
Medical sciences										
In medical schools	862	649	872	903	916	187	69	84	87	113
Outside medical schools	1,070	989	799	805	807	147	141	77	95	93
Agricultural sciences	930	705	979	1,081	1,257	497	483	595	635	657
Engineering	1,353	1,278	1,445	1,499	1,859	302	355	364	388	562
Physical sciences	1,380	1,344	1,482	1,212	1,290	275	280	352	321	350
Earth, atmospheric, and ocean sciences	131	97	219	214	233	64	36	54	57	59
Social sciences	438	367	413	415	430	78	61	77	56	50
Psychology	173	222	219	214	235	25	33	31	31	36
Computer sciences	283	278	356	383	1,060	53	52	64	65	190
Mathematics	325	365	345	338	385	34	38	44	31	41
Other sciences	5	109	202	151	255	0	14	88	86	50
Number of research-performing HBCUs	70	70	68	57	53	70	70	68	57	53

[1] The expanded group consists of all research-performing HBCUs

[2] In past surveys, the year assigned to a survey reflected the year that the survey report was published. For example, the 1998 survey wa published in 1998 while the data were collected for 1997. Starting with the 1999 survey, the survey year reflects the year of the current amount of space.

KEY: HBCUs = Historically Black Colleges and Universities
NASF = net assignable square feet

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 37. Trends in the condition of science and engineering research facilities at Historically Black Colleges and Universities: 1988-99[1] (revised)

Condition of research facilities	Percentage of research space											
	Original 29 HBCUs[2]							Expanded HBCUs[3]				
	1988	1990	1992	1994	1996[4]	1998[4]	1999[5]	1992	1994	1996[4]	1998[4]	1999[5]
Total	100	100	100	100	100	100	100	100	100	100	100	100
Suitable for most highly developed and scientifically sophisticated research	36	31	34	31	32	36	24	22	24	31	35	22
Effective for most uses, but not most scientifically sophisticated research	39	45	41	39	--	--	--	56	35	--	--	--
Effective for most levels of research in the field, but may need limited repair/renovation	18	18	17	21	56	47	41	14	25	55	48	41
Requires major repair/renovation or replacement to be used effectively	7	7	8	9	13	17	34	8	16	14	16	37

[1] In past surveys, the year assigned to a survey reflected the year that the survey report was published. For example, the 1998 surve was published in 1998 while the data were collected for 1997. Starting with the 1999 survey, the survey year reflects the year the majority of the data represents.

[2] The original group consists of the same 29 HBCUs surveyed from 1988 through 1999

[3] The expanded group consists of all research-performing HBCUs, including the 29 original HBCUs.

[4] 1996 and 1998 survey response categories changed to: suitable for the most scientifically competitive research; effective for most levels of research in the field, but may need limited repair/renovation; and requires major renovation or replacement to be used effectively.

[5] 1999 survey response categories changed to: suitable for the most scientifically competitive research; effective for most levels of research in the field, but may need limited repair/renovation; requires major renovation to be used effectively, and requires replacement.

KEY: HBCUs = Historically Black Colleges and Universities
-- = included in other reported categories

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 38. Trends in science and engineering research facilities construction and repair/renovation at Historically Black Colleges and Universities, by project characteristics: 1986-99[1] (revised)

Project characteristics	Original 29 HBCUs[2]								Expanded HBCUs[3]					
	1986	1988	1990	1992	1994	1996	1998	1999	1990	1992	1994	1996	1998	1999
New construction[4]														
Total estimated completion cost														
[current dollars in millions]	72	55	23	9	3	64	35	144	38	29	21	66	64	159
Amount of space [NASF in thousands]	481	319	328	88	68	335	165	464	449	226	166	347	252	489
Number of HBCUs with projects	11	10	6	4	4	10	6	5	10	9	13	14	10	8
Repair/renovation[4]														
Total estimated completion cost														
[current dollars in millions]	14	17	12	9	22	8	16	52	21	9	22	13	18	58
Amount of space [NASF in thousands]	137	308	129	106	343	114	262	443	177	110	347	150	280	486
Number of HBCUs with projects	13	10	5	11	7	5	9	7	8	12	9	15	13	12
Repair/renovation projects costing														
$5,000-$100,000														
Total estimated completion cost														
[current dollars in millions]	--	--	1	3	1	1	--	--	1	26	2	2	--	--
Number of HBCUs with projects	--	--	10	13	11	13	--	--	21	38	24	22	--	--

[1] In past surveys, the year assigned to a survey reflected the year that the survey report was published. For example, the 1998 survey was published in 1998 while the data were collected for 1997. Starting with the 1999 survey, the survey year reflects the year of the majority of the data.

[2] The original group consists of the same 29 HBCUs surveyed from 1988 through 1999.

[3] The expanded group consists of all research-performing HBCUs, including the 29 original HBCUs.

[4] Findings are limited to projects with estimated total cost at completion of $100,000 or more for research space.

KEY: HBCUs = Historically Black Colleges and Universities
NASF = net assignable square feet
-- = data were not collected

NOTE: Net assignable square feet is the sum of all areas on all floors of a building assigned to, or available to be assigned to, an occupant for specific use.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 39. Trends in sources of funds for science and engineering research facilities construction at Historically Black Colleges and Universities: 1986-98 (revised)

Source of funds	Current dollars [in millions]											
			1990		1992		1994		1996		1998[4]	
	1986[1]	1988[1]	Original[2]	Expanded[3]	Original[2]	Expanded[3]	Original[2]	Expanded[3]	Original[2]	Expanded[3]	Original[2]	Expanded[3]
Total	71.8	55.1	22.5	37.6	8.6	28.8	3.3	21.3	64.3	66.2	54.6	65.7
Federal Government	32.7	35.0	12.1	13.0	6.5	4.6	1.3	3.3	4.6	4.8	18.2	26.6
State/local government	25.8	11.5	6.3	18.0	2.0	22.4	2.0	16.8	50.5	50.5	28.5	30.5
Private donations	11.1	7.7	0.0	0.0	0.0	0.0	0.0	0.3	3.0	3.4	6.9	7.7
Institutional funds	2.3	0.9	4.2	4.6	0.0	0.2	0.0	0.9	1.5	1.5	0.9	0.9
Tax-exempt bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.6	0.0	0.0
Other debt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	*	*
Other sources	0.0	0.0	0.0	1.9	0.0	1.6	0.0	0.0	1.0	2.2	0.0	0.0
Number of research-performing HBCUs	29	29	29	70	28	68	29	68	29	57	24	53

[1] Data for the first two time periods were heavily inflated by construction activity at a single institution, which accounted for a substantial fraction of the total dollar amount shown.

[2] The original group consists of the same 29 HBCUs surveyed from 1988 through 1998.

[3] The expanded group consists of all research-performing HBCUs, including the 29 original HBCUs.

[4] Several institutions provided inconsistent information about the costs of new construction and repair/renovation and the source of these funds for the period 1998-99. Consequently, the table data for sources of funding may not be consistent with table data on construction and repair/renovation costs.

KEY: HBCUs = Historically Black Colleges and Universities
* = rounds to zero

NOTES: Components may not add to totals due to rounding. Projects were started during two-year periods. The years in the table reflect the first year of these two-year periods.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 40. Trends in sources of funding for science and engineering research facilities repair/renovation at Historically Black Colleges and Universities: 1986-98 (revised)

Source of funds	Current dollars [in millions]											
			1990		1992		1994		1996		1998[3]	
	1986	1988	Original[1]	Expanded[2]	Original[1]	Expanded[2]	Original[1]	Expanded[2]	Original[1]	Expanded[2]	Original[1]	Expanded[2]
Total	14.1	21.1	11.6	21.4	8.7	9.1	21.5	22.0	7.6	13.2	15.2	21.9
Federal Government	8.7	12.9	3.5	3.6	5.0	4.8	10.2	10.4	2.2	4.5	2.9	6.7
State/local government	4.9	8.0	8.0	17.7	2.1	2.1	6.4	6.6	1.8	2.5	9.7	11.3
Private donations	0.5	0.1	0.1	0.2	1.7	1.7	0.0	0.0	0.0	0.2	1.3	1.6
Institutional funds	0.0	0.1	0.1	0.1	0.1	0.4	2.6	2.6	3.6	6.0	1.3	2.2
Tax-exempt bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other debt	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4	0.0	0.0	0.0	0.0
Other sources	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Number of research-performing HBCUs	29	29	29	70	28	68	29	68	29	57	24	53

[1] The original group consists of the same 29 HBCUs surveyed from 1988 through 1999.

[2] The expanded group consists of all research-performing HBCUs, including the 29 original HBCUs.

[3] Several institutions provided inconsistent information about the costs of new construction and repair/renovation and the source of these funds for the period 1998-99. Consequently, the table data for sources of funding may not be consistent with table data on construction and repair/renovation costs.

KEY: HBCUs = Historically Black Colleges and Universities

NOTES: Components may not add to totals due to rounding. Projects were started during two-year periods. The years in the table reflect the first year of these two-year periods.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 41. Laboratory animal research facilities at Historically Black Colleges and Universities: 1999 (revised)

Indicator	Original 29 HBCUs[1]	Expanded HBCUs[2]
Total animal research space [NASF in thousands]	170.6	188.0
Animal laboratory space [NASF in thousands]	69.2	77.6
Animal housing space [NASF in thousands]	101.4	110.4
Cost of scheduled construction and repair/renovation of laboratory animal facilities, 1998 or 1999 [current dollars in millions]	15.3	15.3
Amount of space scheduled for construction and repair/renovation of laboratory animal facilities, 1998 or 1999 [NASF in thousands]	11.0	11.0

[1] The original group consists of the same 29 HBCUs surveyed from 1988 through 1999.

[2] The expanded group consists of all research-performing HBCUs, including the 29 original HBCUs.

KEY: HBCUs = Historically Black Colleges and Universities
NASF = net assignable square feet

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 42. Geographic distribution of biomedical research space, by field and type of institution: 1999 [1] (revised)

Field and type of institution	Net assignable square feet [in millions]					
	All states	Northeast	Midwest	South	West	IDeA program states[2]
Biological sciences	42.2	9.7	9.0	12.2	11.1	4.5
Academic institutions	31.7	6.7	8.5	9.6	6.7	3.7
In medical schools[3]	12.4	3.1	3.1	4.5	1.6	1.3
Outside medical schools	19.3	3.5	5.4	5.1	5.1	2.3
Research hospitals	2.6	1.3	0.3	0.4	0.6	0.1
Biomedical research institutions	7.9	1.8	0.2	2.1	3.9	0.8
Medical sciences	34.8	9.5	7.9	9.9	7.5	2.9
Academic institutions	26.2	4.8	6.9	9.1	5.4	2.5
In medical schools[3]	18.8	3.1	4.7	7.2	3.7	1.7
Outside medical schools	7.5	1.8	2.2	1.9	1.6	0.8
Research hospitals	5.6	3.9	0.5	0.4	0.8	0.4
Biomedical research institutions	3.0	0.8	0.5	0.4	1.3	*

[1] Guam and Puerto Rico are excluded from the regions but are included in other table columns.

[2] States in which institutions are eligible for grants through the Institutional Development Award (IDeA) program of the National Institutes of Health.

[3] Only includes medical schools accredited by the American Association of Medical Colleges. Includes stand-alone medical schools.

KEY: * = rounds to zero

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 43. Institutional distribution of biomedical research space, by field: 1999 (revised)

Field	Net assignable square feet [in millions]					
		Academic institutions				
	All institutions	All academic institutions	In medical schools	Outside medical schools	Research hospitals	Biomedical research institutions
Biological sciences.....	42.2	31.7	12.4	19.3	2.6	7.9
Medical sciences.....	34.8	26.2	18.8	7.5	5.6	3.0

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 44. Percentage of institutions with leased biomedical research space, by field and type of institution: 1999 (revised)

Field	All institutions	Academic institutions			Research hospitals	Biomedical research institutions
		All academic institutions	In medical schools	Outside medical schools		
Biological sciences.....	18	12	25	7	30	47
Medical sciences.....	30	27	42	15	26	55

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 45. Institutional distribution of animal research space, by type of space: 1999 (revised)

Type of space	Net assignable square feet [in millions]			
	All institutions	Academic institutions	Research hospitals	Biomedical research institutions
All animal research space	15.4	12.8	0.7	1.9
Animal housing	11.1	9.1	0.5	1.5
Animal laboratories	4.4	3.7	0.3	0.4

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 46. Quality of biomedical research space, by field and type of institution: 1999 (revised)

Field and type of institution	Total NASF [in millions][1]	Percent of net assignable square feet (NASF)			
		Suitable for		Requiring	
		The most scientifically competitive research	Most levels of research	Major repair or renovation	Replacement
Biological sciences	41	52	26	17	5
All academic institutions	30	44	29	21	6
Doctorate-granting institutions	29	44	29	21	6
At universities with medical schools[2]	19	45	29	20	7
In medical schools[2]	12	48	27	19	6
Outside medical schools	7	40	32	21	8
Research hospitals	3	69	23	6	3
Biomedical research institutions	8	80	13	5	1
Medical sciences	34	43	31	19	7
All academic institutions	26	40	32	21	7
Doctorate-granting institutions	25	40	32	21	7
At universities with medical schools[2]	22	41	31	22	7
In medical schools[2]	18	43	28	22	7
Outside medical schools	4	33	40	20	6
Research hospitals	5	49	32	11	8
Biomedical research institutions	3	59	22	7	12

[1] Total NASF is the amount of NASF located at only those institutions which also rated the quality of their space for their current research program. Consequently, there may be small variations in the amount of NASF in this table and the NASF amounts in other tables.

[2] Only includes medical schools accredited by the American Association of Medical Colleges. Includes stand-alone medical schools.

KEY: NASF = net assignable square feet

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 47. Biomedical research space needs, by field and type of institution: 1999 (revised)

Field and type of institution	Net assignable square feet (NASF) [in millions]		
	Available space in 1999[1]	Available space needing replacement[1]	Additional space needed
Biological sciences	41.0	2.0	10.6
All academic institutions	30.7	1.8	9.5
Doctorate-granting institutions	29.4	1.6	8.6
At universities with medical schools[2]	19.1	1.2	6.5
In medical schools[2]	11.8	0.7	4.2
Outside medical schools	7.3	0.6	2.2
Research hospitals	2.6	0.1	0.3
Biomedical research institutions	7.7	0.1	0.8
Medical sciences	34.1	2.3	10.2
All academic institutions	25.7	1.6	7.9
Doctorate-granting institutions	25.5	1.6	7.8
At universities with medical schools[2]	22.4	1.4	6.6
In medical schools[2]	18.1	1.2	5.3
Outside medical schools	4.3	0.3	1.3
Research hospitals	5.5	0.4	1.9
Biomedical research institutions	3.0	0.3	0.4

[1] Available space is the amount of NASF located at only those institutions which also rated the quality of their research space for their current research program. Consequently, there may be small variations in the amount of NASF and the NASF amounts in other tables.

[2] Only includes medical schools accredited by the American Association of Medical Colleges. Includes stand-alone medical schools.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 48. Quality of animal research space, by type of institution: 1999 (revised)

Type of institution	Total NASF [in millions][1]	Percent of net assignable square feet (NASF)			
		Suitable for		Requiring	
		The most scientifically competitive research	Most levels of research	Major repair or renovation	Replacement
All institutions	15.0	56.9	25.9	9.8	7.3
Academic institutions	12.3	54.2	27.3	10.5	8.0
Research hospitals	0.7	69.1	18.8	7.6	4.4
Biomedical research institutions	1.8	71.9	21.0	5.1	2.0

[1] Total NASF is the amount of NASF located at only those institutions which also rated the quality of their space for their current research program commitments. Consequently, there may be small variations in the amount of NASF in this table and the NASF amounts in other tables.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 49. Animal research space needs, by type of institution: 1999 (revised)

Type of institution	Net assignable square feet (NASF) [in millions]		
	Available space in 1999[1]	Available space needing replacement[2]	Additional space needed[2]
All institutions	15.3	1.0	2.0
Academic institutions	12.8	1.0	1.6
Research hospitals	0.7	0.0	0.2
Biomedical research institutions	1.8	0.0	0.2

[1] Available space is the amount of NASF located at only those institutions which also rated the quality of their research space for their current research program. Consequently, there may be small variations in the amount of NASF anc the NASF amounts in other tables.

[2] Space was assessed for current research program commitments.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 50. Repair or renovation of biomedical research space, by field and type of institution: FYs 1998-2001 (revised)

Field and type of institution	Net assignable square feet (NASF) [in millions]			
	Available in FY 1999		Repair or renovation	
	Total[1]	Needing repair or renovation[1]	Started in FYs 1998 or 1999	Planned for FYs 2000 or 2001
Biological sciences	41.0	6.7	5.6	4.9
All academic institutions	30.7	6.2	4.5	4.3
Doctorate-granting institutions	29.4	5.9	4.2	3.4
At universities with medical schools[2]	19.1	3.6	3.0	2.3
In medical schools[2]	11.8	2.1	2.3	1.9
Outside medical schools	7.3	1.5	0.7	0.4
Research hospitals	2.6	0.1	0.1	0.1
Biomedical research institutions	7.7	0.4	0.9	0.5
Medical sciences	34.1	6.0	3.3	3.5
All academic institutions	25.7	5.2	2.8	3.1
Doctorate-granting institutions	25.5	5.2	2.8	3.1
At universities with medical schools[2]	22.4	4.7	2.4	2.7
In medical schools[2]	18.1	3.8	1.6	2.2
Outside medical schools	4.3	0.8	0.8	0.5
Research hospitals	5.5	0.6	0.5	0.2
Biomedical research institutions	3.0	0.2	0.1	0.2

[1] Available space is the amount of NASF located at only those institutions which also rated the quality of their research space for their current research program. Consequently, there may be small variations in the amount of NASF and the NASF amounts in other tables.

[2] Only includes medical schools accredited by the American Association of Medical Colleges. Includes stand-alone medical schools.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 51. New construction of biomedical research space, by field and type of institution: FYs 1998-2001 (revised)

Field and type of institution	Net assignable square feet [in millions]		
		New construction	
	Available in FY 1999[1]	Started in FYs 1998 or 1999	Planned for FYs 2000 or 2001
Biological sciences	42.2	4.4	5.9
All academic institutions	31.7	2.2	5.1
Doctorate-granting institutions	30.3	2.1	4.9
At universities with medical schools[2]	19.6	1.3	4.0
In medical schools[2]	12.1	0.9	2.7
Outside medical schools	7.6	0.4	1.3
Research hospitals	2.6	0.6	0.2
Biomedical research institutions	7.9	1.7	0.6
Medical sciences	34.8	4.5	5.0
All academic institutions	26.2	2.2	4.2
Doctorate-granting institutions	26.0	2.0	4.2
At universities with medical schools[2]	22.8	1.4	3.7
In medical schools[2]	18.4	1.0	2.5
Outside medical schools	4.5	0.4	1.3
Research hospitals	5.6	2.2	0.4
Biomedical research institutions	3.0	0.1	0.4

[1] Includes research space identified by all institutions, regardless of whether the institution rated the quality of the space.

[2] Only includes medical schools accredited by the American Association of Medical Colleges. Includes stand-alone medical schools.

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 52. Repair or renovation of animal research space, by type of institution: FYs 1998-2001 (revised)

Type of institution	Net assignable square feet (NASF) [in millions]		
		Repair or renovation	
	Available in FY 1999	Started in FYs 1998 or 1999	Planned to start in FYs 2000 or 2001
All institutions	15.44	0.53	0.63
Academic institutions	12.76	0.45	0.52
Research hospitals	0.74	0.05	0.01
Biomedical research institutions	1.94	0.03	0.10

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 53. New construction of animal research space, by type of institution: FYs 1998-2001 (revised)

Type of institution	Net assignable square feet (NASF) [in millions]		
		New construction	
	Available in FY 1999	Started in FYs 1998 or 1999	Planned to start in FYs 2000 or 2001
All institutions	15.44	0.55	0.84
Academic institutions	12.76	0.40	0.60
Research hospitals	0.74	0.12	0.06
Biomedical research institutions	1.94	0.03	0.18

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 54. Cost to repair or renovate biomedical research space, by field and type of institution: FYs 1998-2001 (revised)

Field and type of institution	Cost of repair and renovation [in millions of current dollars]			
		Planned		
	Started in FYs 1998 or 1999	To start FYs 2000 or 2001	To start after FY 2001	Deferred and not included in institutional plan
Biological sciences	648	782	792	526
All academic institutions	523	669	684	499
Doctorate-granting institutions	503	616	635	487
At universities with medical schools[1]	357	409	403	295
In medical schools[1]	240	315	165	261
Outside medical schools	117	94	238	34
Research hospitals	16	59	.	1
Biomedical research institutions	110	53	108	26
Medical sciences	420	807	649	322
All academic institutions	347	702	569	277
Doctorate-granting institutions	345	697	569	277
At universities with medical schools[1]	315	627	502	224
In medical schools[1]	242	573	407	162
Outside medical schools	73	54	96	63
Research hospitals	64	78	65	45
Biomedical research institutions	8	28	16	*

[1] Only includes medical schools accredited by the American Association of Medical Colleges. Includes stand-alone medical schools.

KEY: * = rounds to zero

NOTES: Components may not add to totals due to rounding.
A deferred project refers to a repair/renovation or new construction project that: is necessary to meet your current S&E research program commitments; is not scheduled for your FYs 2000 or 2001; does not have funding; and is neither for the purpose of developing new programs nor for expanding faculty beyond what is required to fulfill current S&E research program commitments. Includes only projects over $100,000.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 55. Cost of new construction of biomedical research space, by field and type of institution: FYs 1998-2001 (revised)

Field and type of institution	Cost of new construction [in millions of current dollars]			
		Planned		
	Started in FYs 1998 or 1999	To start FYs 2000 or 2001	To start after FY 2001	Deferred and not included in institutional plan
Biological sciences	1,369	2,819	2,197	525
All academic institutions	781	2,538	2,165	366
Doctorate-granting institutions	716	2,440	2,003	335
At universities with medical schools[1]	476	2,049	1,101	184
In medical schools[1]	279	1,432	499	128
Outside medical schools	196	617	602	56
Research hospitals	340	91	7	68
Biomedical research institutions	248	190	24	91
Medical sciences	1,386	2,775	2,936	883
All academic institutions	882	2,464	2,686	717
Doctorate-granting institutions	847	2,462	2,557	717
At universities with medical schools[1]	725	2,312	1,804	448
In medical schools[1]	478	1,240	1,457	346
Outside medical schools	247	1,073	347	102
Research hospitals	441	186	18	156
Biomedical research institutions	63	124	232	10

[1] Only includes medical schools accredited by the American Association of Medical Colleges. Includes stand-alone medical schools.

NOTES: Components may not add to totals due to rounding.
A deferred project refers to a repair/renovation or new construction project that: is necessary to meet your current S&E research program commitments; is not scheduled for your FYs 2000 or 2001; does not have funding; and is neither for the purpose of developing new programs nor for expanding faculty beyond what is required to fulfill current S&E research program commitments. Includes only projects over $100,000.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 56. Cost of repair or renovation of animal research space, by type of institution: FYs 1998-2001 (revised)

Type of institution	Cost of repair or renovation [in millions of current dollars]	
	Started in FYs 1998 or 1999	Planned for FYs 2000 or 2001
All institutions	92.9	197.4
Academic institutions	64.5	186.1
Research hospitals	23.6	2.1
Biomedical research institutions	4.8	9.2

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities

Table 57. Cost of new construction of animal research space, by type of institution: FYs 1998-2001 (revised)

Type of institution	Cost of new construction [in millions of current dollars]	
	Started in FYs 1998 or 1999	Planned for FYs 2000 or 2001
All institutions	323.4	417.5
Academic institutions	222.7	304.4
Research hospitals	81.2	29.4
Biomedical research institutions	19.5	83.7

NOTE: Components may not add to totals due to rounding.

SOURCE: National Science Foundation/Division of Science Resources Studies, Survey of Scientific and Engineering Research Facilities